DOCUMENT RESUME

ED 402 818 HE 029 735

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TITLE College Influence on Student Intentions toward International Competence. ASHE Annual Meeting Paper.
PUB DATE 31 Oct 96
NOTE 46p.; Paper presented at the Annual Meeting of the Association for the Study of Higher Education (21st, Memphis, TN, October 31 - November 3, 1996).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS College Students; *Cross Cultural Training; *Cultural Exchange; *Global Approach; Global Education; Higher Education; Models; *Outcomes of Education; Overseas Employment; Second Language Learning; *Student Attitudes; *Student Educational Objectives; Student Exchange Programs
IDENTIFIERS *ASHE Annual Meeting; International Competence

ABSTRACT

This study attempted to test the concept of international competence as a construct and to estimate the extent to which college experience predicts variance on student intentions toward international competence. Relying on Lambert's model of global competence, the study tested five components of international competence for validity and reliability as a single construct. These five components were world knowledge, foreign language proficiency, empathy for other cultural viewpoints, approval of foreign people and cultures, and ability to practice one's profession in an international setting. Interviews with 22 college students preceded the design and administration of a survey to seniors (N=449) in business, engineering, and arts and sciences at one American research university. The International Competence Intention Index was created through factor analysis. It was found that psychosocial factors of perceived opportunity, self-efficacy, social influence, and liberal values directly predicted intention. Gender was an indirect predictor of intention, with women scoring significantly higher than men, based on higher self-efficacy beliefs reported by women. College experience, travel during college and the field of study also predicted intention indirectly. Race/ethnicity, parental education, pre-college international experience, and school of enrollment were not found to have either direct or indirect effects on intention. (Contains 34 references.) (PRW)

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COLLEGE INFLUENCE ON STUDENT INTENTIONS TOWARD INTERNATIONAL COMPETENCE

Susan Lewis English

University of Michigan

October 31, 1996

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This paper was presented at the annual meeting of the Association for the Study of Higher Education held in Memphis, Tennessee, October 31 - November 3, 1996. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

COLLEGE INFLUENCE ON STUDENT INTENTIONS TOWARD INTERNATIONAL COMPETENCE

Susan Lewis English

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October 3, 1996

ABSTRACT

The goal of this study was (1) to test the concept of international competence as a construct and (2) to estimate the extent to which college experience predicts variance on student intentions toward international competence. Seniors in business, engineering, and arts and sciences at one research university were surveyed (n = 449). The International Competence Intention Index (ICII) (α = .87) was created through factor analysis. It was found that psychosocial factors of perceived Opportunity, Self-Efficacy, Social Influence, and Liberal Values directly predicted intention, while gender and three types of college experience predicted intention indirectly, through the psychosocial factors.

INTRODUCTION

Since the 1980's, educators at American institutions of higher education have recognized the need to prepare all students for living and working in an increasingly global world. Calls for internationalization have been voiced through such professional associations as the American Association of State Colleges and Universities (Leinwand, 1983), the American Council on Education (Pickert and Turlington, 1992), and the Association of American Colleges (Johnston and Edelstein, 1993). Institutional responses have included steps to internationalize the faculty, curriculum and co-curriculum, to increase the presence of international students on campus, and to send more and different types of students abroad.

This study was built on the premise that, to claim that colleges and universities are preparing students for a global world, the undergraduate years should not only equip students with the skills and knowledge they will need for global work and living. The college experience should positively influence students' intentions to use these skills and this knowledge in their future professional lives. Therefore, the following question was investigated: What predicts college seniors' intentions to apply international competence in their professional work ten years after graduation?

CONCEPTUAL FRAMEWORK

The investigation was guided by a conceptual framework derived from three sources: (1) a conceptualization of global or international competence, (2) studies of college impact, and (3) psychosocial theories of intention and volitional behavior.

International Competence

Lambert (1994) reviewed the internationalization literature and constructed the concept of "global competence" to describe the qualities desirable for professional practice in an international setting. He conceptualized global competence as consisting of five components: (1) world knowledge, (2) foreign language proficiency, (3) empathy for other cultural viewpoints, (4) approval of foreign people and cultures, and (5) ability to practice one's profession in an international setting. This investigation considered Lambert's five-part concept as the desired outcome of internationalization at the undergraduate level. It began by testing these five components for validity and reliability as a single construct.

Prior to this study, international competence research had focused on measures of "global knowledge." From a national study of college students' global knowledge by Barrows et al. (1981) through studies on specific college campuses (Hembroff et al., 1989 and 1990; Malanchuk et al., 1993; Woyach, 1988), men had scored significantly higher than women. Yet, research had also shownforeign language classes and overseas study to be American college experiences populated principally by women (Carlson et al. 1990

and 1991; Koester, 1985 and 1987). One question underlying this study, therefore, was how the genders would compare on intentions toward international competence.

College Impact

While this study was not itself a college impact study, its design was guided by both sociological and psychological approaches to understanding college impact (Feldman and Newcomb, 1969/1992; Pascarella and Terenzini, 1991). Following Weidman's Model of Undergraduate Socialization (1989) and a qualitative study by Harrop (1991) on the relation of college experience to global understanding, both college and non-college influences were considered.

Like college impact studies, research on the impacts of study and travel abroad had shown that outcomes can vary according to the background that students bring to the experience as well as the purpose, type, and length, and nature of their trip (e.g. Altbach and Wang, 1989; Carlson et al., 1990 and 1991; Du Bois, 1956; Eide, 1970; Koester, 1985 and 1987; Opper et al., 1990; Sell, 1983; Spencer and Awe, 1971; Von Klemperer, 1973; Weaver, 1989). Bachner et al. (1993) found that experience abroad in youth cuts across gender and other differences to create a "like-minded group." In a study of three decades of Japanese Fulbright exchange scholars and students, Uyeki (1993) found that women were more impacted by the overseas experience than men in identity and self-esteem. The impact of other types of college experience on international learning had shown mixed results. Even though students come to college with a range of international interests and desires, Janes (1991) saw the undergraduate years as pivotal in student

decisions to enter world area studies. By contrast, Harrop (1991) found that the college experience can have a *negative* impact in international interests.

In a longitudinal study of Stanford University graduates, Katchadourian and Boli (1994) found that the college experience shaped personal relationships and social horizons, and that values formed during college showed remarkable stability ten years later. This study, therefore, looked at college seniors to determine the influence of the college experience, relative to pre-college experience, on their international interests and intentions for ten years hence.

Psychosocial Research

The relationship between attitudes and behaviors has interested social psychologists since the 1930's. Since the 1970's, it has been shown that volitional behavior--acts that are not simply spontaneous but that require some thought and preparation--can be explained and predicted to some extent by the *intentions* that are formed prior to action. Intentions, in turn, can be predicted by such psychosocial factors as attitude, social influence, and perceived behavioral control, as well as by evidence such as past trying. Some researchers have assumed the strong position that intention can be explained by psychosocial factors alone, that all other variables lie "outside the model," influencing intention indirectly through the psychosocial factors (Ajzen and Fishbein, 1980; Ajzen and Madden, 1986). Yet, there is considerable controversy in the research literature concerning which model and method is most appropriate for understanding and predicting behavior (e.g. Bagozzi, 1992; Eagly and Chaiken, 1993). In this study,

psychosocial factors were considered as potentially important predictors of international intentions. At the same time, the study took a critical approach to the psychosocial methodology and to the testing of the following hypotheses:

> H1. Intention can be explained by the psychosocial factors such as attitude, social influence, and perceived behavioral control.
>
> H2. Other variables predict intention only indirectly, through the psychosocial factors.

METHODS

Data collection began with short interviews with college students (n = 22) to elicit their attitudes toward international competence, their social norms, and their perceptions of behavioral control in terms of their own ability and opportunity to apply international competence in their professional lives ten years after college. The interviews also probed for pre-college and college experience that might have influenced the students' international intentions. The students were asked to react to a profile of two imaginary individuals, Karen and Michael, who demonstrated the five components of international competence in professional practice ten years after graduation. A panel of five experts known for research, publication, and/or leadership in international education also responded to the profile and to the proposed concept of international competence. The results of the interviews and expert panel guided the design of a survey. After pilot testing (n = 69), the profile (Figure 1) and survey (Appendix 1) were refined.

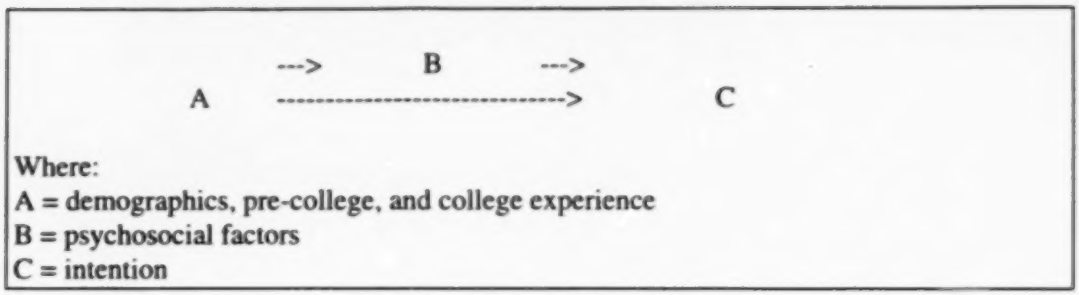
Figure 1. Profile

It is ten years since Karen and Michael completed their undergraduate degrees. Both have the ability to practice their profession in an international setting. Whether working in the U.S. or abroad, their job performance is enhanced by their world knowledge. Each one is fluent in a foreign language. When there is a misunderstanding, they consider the cultural viewpoint of the others involved. Karen and Michael welcome the opportunity to work with people from other countries.

The level analysis was set at the individual level, and the population was defined as all seniors in three schools at one American research university. Cluster sampling was used to obtain a sample that, while not perfectly random, would provide a sample of range. In the School of Business and the School of Engineering, the instructors of a required senior course were contacted and asked to distribute the survey to the students in their course. In the School of Arts and Sciences, a random sample of senior-level courses was drawn and those instructors were similarly contacted. The survey was administered during the winter term of 1996. Institutional data from the registrar were used to estimate the return rate and representativeness of the sample by school, gender, and race/ethnicity. The significance level was set at $p < .05$.

Data analysis consisted of four major steps: description of the sample, creation of the outcome measure through factor analysis, recoding and calculation of predictors, and multiple regression analysis. For hypothesis-testing, this study adapted the model for main and indirect effects introduced by Baron and Kenny (1986) (see Figure 2). This model suggests that, for B to mediate the effect of A on C, three conditions must be met: A must affect C, the relation of A to C must be reduced by the introduction of B, and A must affect B.

Figure 2. Model for Main and Indirect Effects



To apply the Baron and Kenny model to this dataset, the predictor variables were divided into two groups. Group A consisted of demographic, pre-college, and college predictors, as well as any significant interaction effects between gender, race/ethnicity, parental education, and school. College experience was defined as foreign language and international course-taking, time abroad during the college years, and contact with non-native speakers of English as instructors, housemates, and friends. Also considered were school of enrollment, international content of the curriculum, and importance of international opportunity in selection of major field. Group B consisted of the psychosocial factors of attitude, social influence, and perceived control.

The last item on the survey was an open-ended question: "How can colleges and universities prepare students for an increasingly global world?" Student responses were content analyzed to identify themes of relevance to the study. Then, the number of comments on each theme were tabulated by school and gender and comments within each category were further analyzed.

RESULTS

The total count of 624 completed surveys was reduced by eliminating non-seniors, non-United States citizens, students not enrolled in one of the three schools, participants in the pilot study, and those with missing data on two or more of the six items concerning international competence. This left a total of 449 students in the sample. By conservative estimate, the overall return rate was 52% (Table 1).[1]

Table 1. Estimated Total Response Rate for Seniors in All Three Schools

	Females			Males			All		
	Enrolled	Sample	Rate	Enrolled	Sample	Rate	Enrolled	Sample	Rate
African American	26	15	58%	25	13	52%	51	28	55%
Asian American	39	18	46%	55	22	40%	94	40	43%
Hispanic	8	4	50%	15	6	40%	23	10	43%
Native American	1	1	100%	4	1	25%	5	2	40%
Caucasian/White	259	143	55%	357	193	54%	616	336	55%
Other/Unknown	28	21	75%	39	12	31%	67	33	49%
TOTAL	361	202	56%	495	247	50%	856	449	52%

Enrollment figures for seniors in surveyed classes only.

The sample was fairly equally divided between the three schools: School of Business (n=143), School of Engineering (n=153), and School of Arts and Sciences (n=153). Chi-squared analysis showed a significant differenced between the proportions of the sample and population only in the School of Engineering, where a disproportionate number of white males (+8%) and white females (+4%) were present in the sample.

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[1] Because some students were absent the day the survey was given to their class, the actual return rate must be higher than 52%.

Seventy-five percent of the students indicated Caucasian or white race/ethnicity. The largest group of non-white students in the sample identified themselves as Asian-American (9%), with smaller proportions of African-Americans (6%) and even less representation of other specific races and ethnicities. On the whole, the non-white students came from families with more highly educated mothers. They spent a greater part of their youth outside the U.S./Canada and, during college, had more foreign friends and housemates than did the white students.

Engineering students were less likely to have immigrant grandparents, and they tended to come from homes with a lower level of parental education. They spent far less of their college time engaged in international studies or activities, and yet they had significantly more daily contact with students who spoke languages other than English. Business students more often considered international opportunities in the selection of their major, yet not as many had come to college with preparation in foreign languages.

Bivariate analyses showed that the students who came to college with prior international experience tended to be either female, nonwhite, and/or from homes with a high level of parental education. During college, females and the children of well-educated parents engaged in far more types of international course-taking and international travel than did others.

International Competence Intention Index

The first task in data analysis was to create the outcome measure. For this purpose, factor analysis was used. The five hypothesized components of international competence, along with the general intention to be or not to be like Karen and Michael, produced a single factor, thus confirming Lambert's concept of global competence as a single construct for this dataset (Table 2).[2] By averaging scores across the six items for each case, the International Competence Intention Index (ICII) was created.[3] The high alpha reliability of the ICII index ($\alpha = .87$) and approximately normal distribution suggested its suitability for use as the outcome measure in multivariate analyses.

Table 2. Factor Loadings for Intention Variables

Item	Intention	Factor 1	Factor 2
12b	to have world knowledge that will enhance job performance	.81	.08
12g	to be like Karen and Michael	.80	.08
12f	to work with people from other countries	.78	-.10
12e	to see things from other cultural viewpoints	.77	-.17
12a	to practice your profession in an international setting	.74	.23
12d	to be fluent in a foreign language	.69	-.04
12c	to start your own business[4]	-.00	.97
	Eigenvalue	3.52	1.05
	Percent of Variance	50.2%	14.9%

Rotated factor matrix using varimax rotation, with results sorted in descending order of loading on Factor 1.

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[2] Note that intention "to start your own business" was included in the survey as a distractor unrelated to international competence. The fact that this item did not load on the international competence factor lends support to the content validity of international competence as a construct.

[3] It was decided to average relevant item scores rather than use factor scores to make the outcome measure more easily replicable in later studies.

[4] See footnote 2 above.

Predictors

To prepare the Group A predictors for regression analysis, the demographic, school, and experience variables were recoded (Table 3). This produced demographic predictors for Gender, Race/Ethnicity, and Parental Education.[5] Childhood Experience and Childhood Travel were created to represent pre-college experience. College influence was represented by College Experience, Travel During College, Field of Study, and School.[6]

Tests for interactions revealed a significant *negative* effect for the interaction of female gender and enrollment in the School of Engineering on intention. This suggested that, for women in engineering, a significant drop in their intentions toward international competence was related to their enrollment in the School of Engineering. The gender-engineering interaction was retained as an additional Group A predictor.

The psychosocial or Group B variables were factor analyzed in three groups--attitudes, social norms, and perceived control. Nine factors of relevance to this study emerged (Figure 3).

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[5] Parental education was used as a proxy for socioeconomic status.

[6] To estimate the influence of school of enrollment, dummy variables were created for the School of Business and School of Engineering, leaving the school of Arts and Sciences as the anchor.

Table 3. Frequencies of Group "A" Predictors

Items	Coding	Predictor	Mean	St. Dev.	Skew	Min	Max	n
16e	The average of mother's and father's highest level of education, on a scale of 1 to 6.	Parental Education	4.06	1.11	-.38	1	6	448
v02	Enrollment in School of Engineering	Engineering	.34	.47	.67	0	1	449
v02	Enrollment in School of Business	Business	.32	.47	.78	0	1	449
v13k	Total time spent outside the U.S./Canada before college (coded 1 to 5).	Pre-College Travel	2.23	1.56	.90	1	5	449
v13a-j; v13l-m	The sum of twelve items to be checked if true (not true = 0; true = 1), including having grandparents or parents born abroad, hearing or speaking a language other than English, having friends who spoke English as a foreign language, study of foreign languages, being a foreign exchange student, and looking for a college or university with an international emphasis	Pre-College Experience	4.63	2.71	.58	0	11	449
15j,l	Total time spent outside the U.S./Canada during college (coded 1 to 4).	Travel During College	1.67	1.12	1.35	1	4	448
15a,b	Estimated percentage of curriculum in major field concerned with international topics (coded 1-4) averaged with importance of international opportunity in selection of major (coded 1-5).	Field of Study	2.40	1.10	.06	1	4	432
14a,c 15b-k 15e-h	The sum of ten items to be checked if true (not true = 0; true = 1), including foreign language courses taken, taking courses with an international focus, travel abroad during college and receiving information about travel abroad, and contact with non-native speakers as instructors, friends, or in place of residence	College Experience	5.48	2.60	.15	0	12	449

Items	Coding	Predictor	Mean	St. Dev.	Skew	Min	Max	n
16b	male = 0, female = 1	Gender	.43	.50	.27	0	1	449
16c	Non-white (including African-American, Asian American, Hispanic, Native American, Other, and multiple ethnicity) = 0, White/Caucasian = 1	Race/ Ethnicity	.75	.43	-1.15	0	1	449
-	Intention was regressed on Gender and Engineering, and then their product term was entered into the regression in a second block. Product term of gender x engineering. Mean scores on intention showed: (1) women in the School of Engineering (mean = 3.41), (2) women *not* in the School of Engineering (mean = 3.69), (3) *men* in the School of Engineering (mean = 3.26), and (4) men *not* in the School of Engineering (mean = 3.21).	Gender x Engineering						

Figure 3. Psychosocial Factors

Attitude Factors

- *Liberal Expectancy* ($\alpha = .82$): Belief that being like Karen and Michael will result in experiencing other cultures, living or traveling abroad, seeing things from other cultural viewpoints, and becoming a broader person. Explained 10.2 % variance in intention.
- *Liberal Value* ($\alpha = .81$): The desirability of experiencing other cultures, living or traveling abroad, seeing things from other cultural viewpoints, and becoming a broader person. Explained 33.6 % variance in intention.
- *Career Expectancy* ($\alpha = .74$): Belief that being like Karen and Michael will bring increased professional capability, improved job prospects, and an exciting life. Explained 8.3 % variance in intention.
- *Career Value* ($\alpha = .65$): The desirability of increased professional capability, improved job prospects, and an exciting life. Explained 7.8 % variance in intention.

Social Factors

- *Social Influence* ($\alpha = .87$): Beliefs about whether your parents, teachers, professors, college friends, friends outside of college, and other people of personal significance think you should have a future like that of Karen and Michael. Explained 36% variance in intention.
- *Intimate Motivation* ($\alpha = .79$): Motivation to comply with parents, friends, and significant others. Explained 15.5% variance in intention.
- *Institutional Motivation* ($\alpha = .70$): Motivation to comply with most respected high school teachers and college professors. Explained 8.8% variance in intention.
- *Self-Motivation:* [7] Motivation to comply with your own opinion regard to your future career. Explained 7.7% variance in intention.

Perceived Control Factors[8]

- *Self-Efficacy* ($\alpha = .86$): Beliefs chiefly about your innate or internal capabilities--including ease in working with people from other countries, opportunity to have world knowledge, and both ease and opportunity in seeing other cultural viewpoints and speaking a foreign language fluently. Explained 42.8% variance in intention.
- *Opportunity* ($\alpha = .83$): Difficult/ease and opportunity to practice your profession in an international setting. Explained 12.4% variance in intention.

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[7] The Self-Motivation factor was not used in later analyses because it showed little variance among students.

[8] In this study, the term "control factor" refers to the concept of perceived behavioral control. The term is not intended to imply any kind of statistical control.

Multiple Regression Analysis

To test for main and indirect effects, the International Competence Intention Index (ICII) was used as the outcome measure in a series of multiple regression analyses. Results showed that the Group A variables and their significant interactions accounted for 31% of variance in intention, and that the introduction of the Group B psychosocial factors increased the explanatory power of the model to 74%. However, all the Group A predictors that were significant in the first step lost their significance after the introduction of the Group B psychosocial factors into the regression. The significant Group B predictors were then regressed one by one on the Group A predictors. Results confirmed the two hypotheses: (1) that intention could be explained by the psychosocial factors and (2) that other variables predicted intention only through the psychosocial factors.

Table 4. Intention Regressed on Group A and B Variables

				Block 1		Block 2	
Block	Adj. R^2	Type	Predictors	Beta		Beta	
1	.29*						
		Demographic	Gender	.20	*	-.03	
			Race/Ethnicity	-.02		-.01	
			Parental Education	-.06		-.02	
		Pre-College	Childhood Experience	.08		.05	
			Childhood Travel	.09		.01	
		College	Business School	.06		.01	
			Engineering School	.07		.01	
			College Experience	.25	*	.04	
			Field of Study	.17	*	.04	
			College Travel	.17	*	.02	
		Interaction	Gender x Engineering	-.08	*	-.03	
2	.74*						
		Attitude	Liberal Value			.12	*
			Liberal Expectancy			.06	*
			Career Expectancy[9]			.05	
			Career Value			.06	*
		Social	Social Influence			.09	*
			Intimate Motivation			-.00	
			Institutional Motivation			.00	
		Control	Self-Efficacy			.44	*
			Opportunity			.49	*

[9] While Career Expectancy showed no significance in the full regression model, it was a significant predictor in an earlier regression of intention on the Group B variables alone.

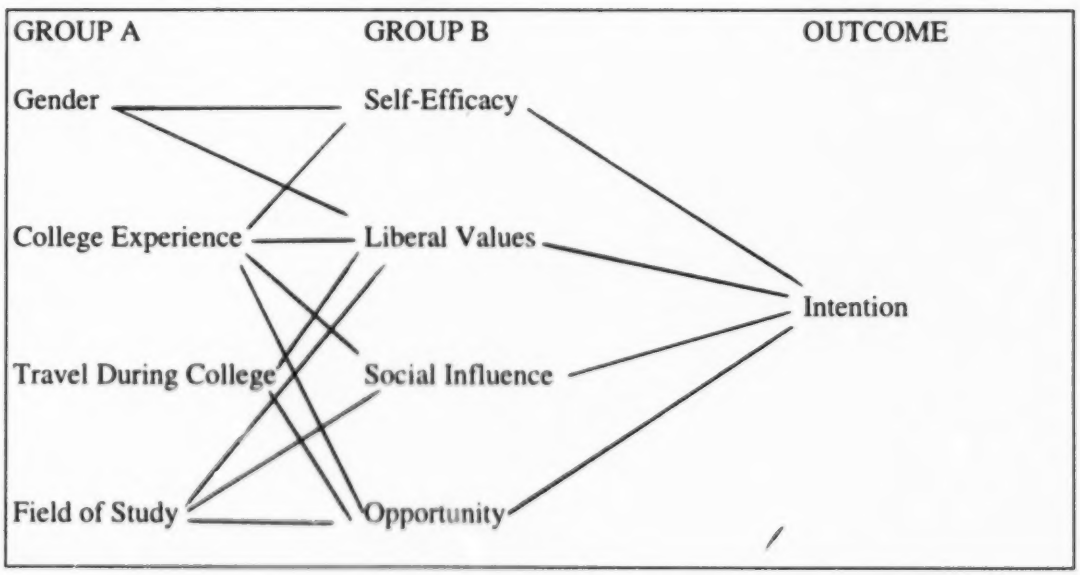
The model was then reduced by eliminating non-significant predictors, and the regression analyses were repeated (Table 5).

Table 5. Intention Regressed on the Reduced Model

				Block 1	Block 2
Block	Adj. R^2	Type	Predictors	Beta	Beta
1	.27*				
		Demographic	Gender	.15 *	.02
		College	College Experience	.29 *	.05
			Field of Study	.14 *	.04
			College Travel	.21 *	.02
2	.74*				
		Attitude	Liberal Value		.10 *
			Liberal Expectancy		.05
			Career Value		.05
		Social	Social Influence		.11 *
		Control	Self-Efficacy		.45 *
			Opportunity		.51 *

Those predictors retaining significance were used to construct the International Competence Intention Model (ICIM) (Figure 4). The model can be interpreted as follows. In general, gender and three aspects of college influenced intention indirectly through four psychosocial factors: Self-Efficacy, Liberal Values, Social Influence, and perceived Opportunity. The influence of the College Experience was mediated by all four factors. Field of Study influenced intention through all factors but Self-Efficacy. Travel During College influenced Liberal Values and perceived Opportunity, which in turn influenced intentions. Last but not least, gender influence on intention was medited by both Self-Efficacy beliefs and Liberal Values.

Figure 4. International Competence Intention Model (ICIM)



Differences Between Groups

Comparisons made by school, gender, and race/ethnicity by comparing group mean scores on each variable. Notably, childhood differences in international orientation for the two genders appeared to be accentuated by the senior year in college (Figure 5) but minimized for students of different racial/ethnic identities (Figure 6).

Bivariate analyeses showed that the women in the sample had significantly more international experience than men both before and during college. Before college, women went abroad as foreign exchange students at more than twice the rate of men. During college, more women reported receiving information on campus about study abroad, and more traveled abroad, both with and without college sponsorship. On unsponsored travel, the women in the sample spent an average of .73 months outside the U.S./Canada, as compared to an average of .39 months for their male counterparts. In terms of course-taking patterns, a significantly higher percentage of women than men reported taking foreign language courses, both required and elective, as well as courses with international content. A significantly higher percentage of women had considered international opportunity in the selection of their major, and women reported the curriculum of their major field to have significantly more international content than did men.

Asian Americans as a group as well as Hispanic, Native American, and students of mixed or unspecified race/ethnicity brought to college a rich background in overseas, multilingual, and multicultural experience, but this experience was not necessarily translated into intentions toward international competence. Further breakdown of the

data by both gender and race/ethnicity suggested that African American males in the sample particularly value career success but, doubting their international abilities and seeing little opportunity in the international arena, do not see international competence as a viable route to career success.

A moderate relationship appeared between students' intentions toward international competence and, by student report, the opinions of their most respected professors ($r = .34$).[10] Still, students rated their professors' endorsement of life like that of Karen and Michael with a mean rating of 3.74 (on a 5-point scale, where 1 = unlikely and 5 = likely), suggesting that the professors' enthusiasm for international competence, as perceived by the students, is lukewarm at best. Further, there was a non-significant relationship between students' intentions and the presence of foreign-born instructors in the classroom. In fact, the engineering students scored lower than other students on international intentions in spite of the fact that they had significantly more foreign-born instructors than the other students.

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[10] Students also reported low motivation to comply with the opinions of their most respected college professors; however, the correlational data show otherwise.

Figure 5. Differences by Gender

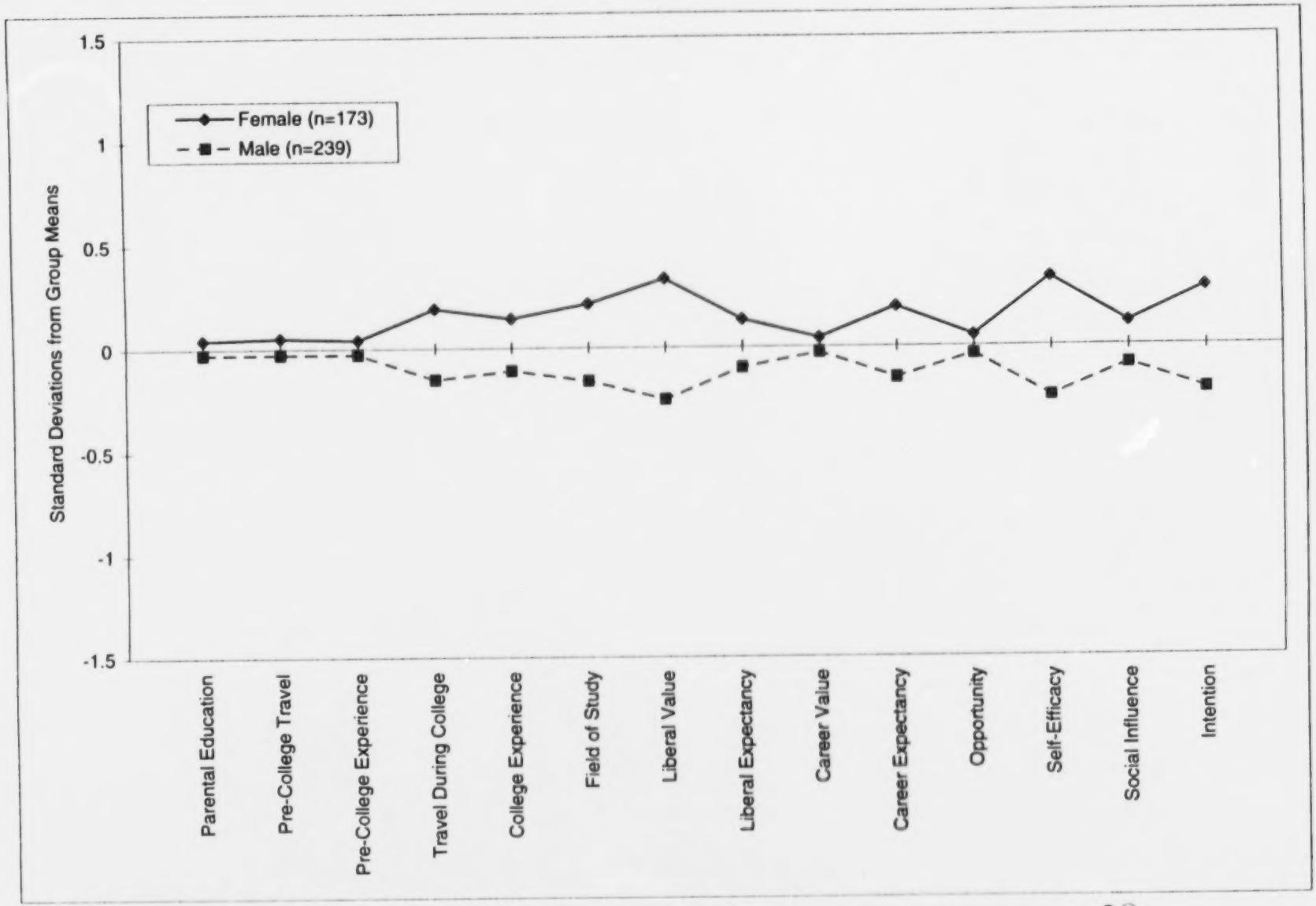
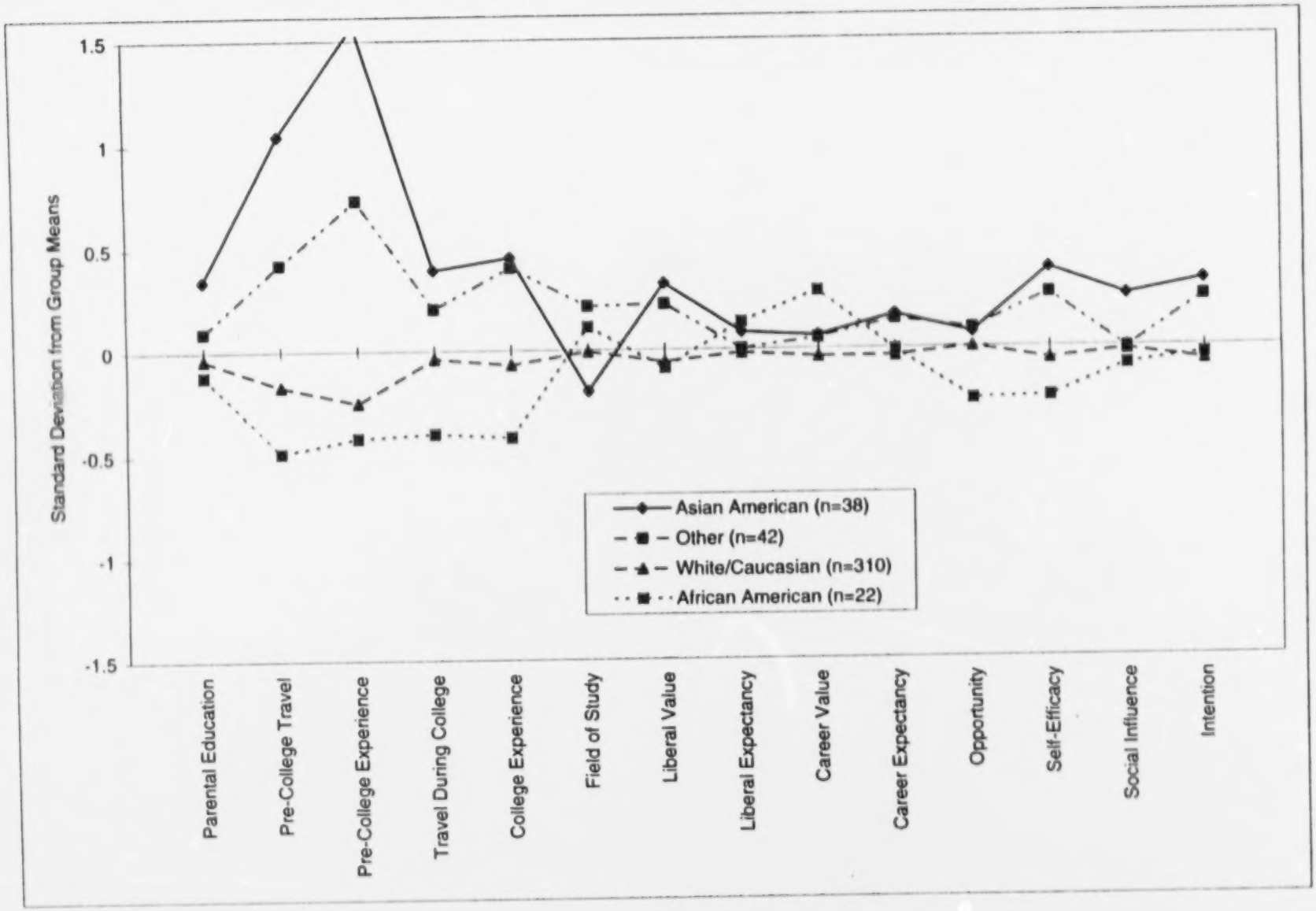


Figure 6. Differences by Race/Ethnicity



Qualitative Results

Handwritten responses to the question, "How can colleges and universities prepare students for an increasingly global world?" produced a total of 490 comments for the 449 students in the sample, for an average of 1.09 comments per student. From these comments, six categories of themes were identified. The average number of comments per student by theme, school, and gender are shown in Table 6. The topic mentioned most frequently concerned curriculum and course requirements, particularly by females in the School of Engineering. A topic addressed by students of both genders and in all three schools was that of preparing students for a global world through the teaching foreign languages and cultures. While some objected to foreign language study as a requirement, others called for earlier instruction, better instruction, and higher standards for foreign language proficiency.

Other themes concerned the impacts of cultural diversity, overseas experience, and communications technology. The comments on cultural diversity suggested an association, in the minds of these students, between multicultural and international competence. On the topic of study and travel abroad, students addressed issues of cost, opportunity, time, marketing, credits, and quality of experience. Yet other students saw global communication technology as the primary means to internationalization.

Table 6. Number of Comments per Student by Theme, School, and Gender

Figures represent number of comments divided by number of students in each cell.

	Business Females	Business Males	Engineering Females	Engineering Males	Arts and Science Females	Arts and Science Males	TOTAL
Curriculum, course requirements	0.36	0.22	0.45	0.29	0.35	0.21	0.31
Study, travel, work abroad	0.28	0.26	0.18	0.15	0.18	0.19	0.20
Language, culture	0.16	0.19	0.16	0.18	0.22	0.16	0.18
Diversity, campus climate	0.16	0.12	0.25	0.14	0.20	0.10	0.16
Technology	0.03	0.00	0.02	0.02	0.01	0.06	0.02
Other	0.15	0.13	0.39	0.28	0.18	0.26	0.22
TOTAL	1.13	0.93	1.45	1.06	1.14	0.97	1.09

DISCUSSION

A major finding of this study is the confirmation of the concept of international competence, adapted from Lambert (1994), as a single construct. It remains, however, for the International Competence Intention Index (ICII) to be further tested, shaped, and understood by future studies. The findings about direct and indirect influences on intentions toward international competence are also of interest, along with gender and racial differences between students. Together, these findings highlight issues and raise questions that should command the attention of both researchers and practitioners in higher education who are concerned with student preparation for an increasingly global world.

Direct and Indirect Influence

The four direct predictors of intention--Opportunity, Self-Efficacy, Social Influence, and Liberal Values--represent some basic principles that govern rational human action. These are values, social norms, and the sense of one's own potential combined with a view of what is possible.

The influence of liberal values on international intentions should not be surprising, knowing that the study of foreign languages and cultures and travel abroad have traditionally been viewed as means to achieving a broad world view. A more interesting finding in this study concerns the perceived importance of international competence to career success. While the Career Expectancy factor lost predictive significance in the full model (see footnote to Table 4), we can speculate that the current

wave of internationalization may be driven by the rising importance of international competence for career success in fields outside the humanities. If this is so, we can predict an increase in the influence of Career Expectancy as international competence becomes increasingly important for students in professional and technical fields like business and engineering.

As for Social Influence, the influence of college professors deserves some discussion. It is notable that student intentions were influenced to some extent by their professors' opinions, but that influence was not strongly favorable toward international competence. This suggests the potential of faculty to more positively influence student intentions toward international competence if appropriate interventions could be designed. There may be ways both to strengthen faculty beliefs in the importance of international competence and to improve the communication of these beliefs to students.

Three of the four indirect influences on student intentions toward international competence concerned various aspects of college: College Experience, Travel During College, and Field of Study.[11] It is notable and perhaps surprising that none of the following predictors had either direct or indirect effects on intention: race/ethnicity, parental education, pre-college international experience, and school of enrollment. With the exception of gender differences, this study suggests that college may influence student intentions toward international competence regardless of the students' background characteristics or the international experience they bring with them to college.

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[11]The fourth indirect influence was gender.

Gender and Racial Differences

On intentions toward international competence, women scored significantly higher than men, with gender influencing intention through self-efficacy beliefs. For example, stronger intentions by women were explained by beliefs in their ability to be fluent in a foreign language, to see other worldviews, and to find international opportunities awaiting them in the world of work. This finding raises questions about the reasons for this apparent gender gap and how it could affect the academic and career choices of women and men. Is the international arena an area where women enjoy an unfair advantage over men? Do American women experience a mastery orientation toward foreign languages and cultures, while men a helplessness orientation? Are men pushed into mainstream careers and excluded from the pipeline to international careers, while women have more freedom to develop international interests that might be considered marginal by society? Or will the women in this sample pursue modern languages and international interests because of lack of opportunity, real or perceived, in other fields?

The accentuation of gender differences in international orientation during college and higher self-efficacy beliefs on the part of women raises yet another question. We know that the women in this study spent twice as much time abroad as the men during college. If it is true that overseas experience during high school creates a "like-minded" group (Bachner et al., 1992), is it possible that overseas experience during college may have exerted a unifying influence on these women? Further, for those women and men who went abroad, did the overseas experience, as it did for Japanese Fulbrighters in the study by Uyeki (1993), have a particularly powerful effect on the self-efficacy of the women?

The gender findings in this study contrast sharply with the earlier findings by Barrows (1980) and others that men scored significantly higher than women on tests of global knowledge. This finding demonstrates how results can be a function of the outcome measure we use. As college administrators embark on strategic plans to internationalize, they might carefully consider which outcomes of internationalization they wish to achieve.

Looking at race/ethnicity, the lower self-efficacy beliefs and perception of limited international opportunity on the part of African American males calls for interventions to increase opportunities, change perceptions, or both. The finding that students of Asian American, Hispanic, Native American, mixed, and unknown race/ethnicity came to college with broad international experience that is not necessarily translated into career choices raises several concerns. Are these students given adequate recognition for their multilingual and multicultural expertise? Do they have the opportunity to preserve and exploit their skills in college to their own benefit and to the benefit of the institution and the global society? Or do they feel pressure to discount their global orientation to achieve academic and career success?

CONCLUSIONS

There are limitations to this study that may affect the interpretation of findings and, at the same time, inform future research. First, the data can be generalized only to the population of seniors who are U.S. citizens in three schools at the institution under study, and generalizations to the students in the School of Engineering can be made only with limited confidence. Future studies should look at broader populations, considering

permanent residents of the United States and international students as well as United States citizens, comparing institutions, and looking at cross-national contexts. A second major limitation is that, other than the theoretical association between intentions and behaviors, this study tells us nothing about whether students will actually act on their intentions ten years after graduation. That is a step left for future research. The third major limitation is that this exploratory study, while defining constructs and predictors, does not actually measure college impact or establish causation. It remains for future studies to test the International Competence Intention Index (ICIM) using causal methods.

Nevertheless, there are both theoretical and practical implications to this study. First, it reveals differences among different types of students in the direction and strength of their intentions toward international competence. Further, it shows to what extent such differences can be attributed to college experience, as opposed to certain other factors. For administrators committed to strengthening student intentions to develop and apply international competence, this knowledge could guide the design of interventions for specific groups of students. This may have policy implications for such areas as admissions policies, curricular and co-curricular initiatives, academic and career advising, faculty hiring, development, and promotion, and the teaching-learning process.

A final note concerns the potential for the research of various disciplines to inform each other. The qualitative data in this study suggest that our understanding of multicultural competence and international competence could be broadened and deepened by bringing these two separate streams of research together. Future gender studies might consider various aspects of international competence, while international competence research could look more closely at factors like self-efficacy and perceived opportunity that are central to gender studies. College impact studies might consider some of the

predictors and outcomes that are considered by study abroad research, while research on the impacts of study abroad could benefit from application of methodology used in college impact studies. For example, is the decision to go abroad during college an indication of student involvement or a signal of departure? There may in fact be striking similarities between one year of immersion in a foreign culture and four years on a college campus.

Appendix 1. Final Survey

FINAL SURVEY - FORM A

What is your current student status?

___ junior
___ senior
___ other: _____

In which school are you enrolled?

___ Business
___ Engineering
___ LS&A
___ Other: _____

What is your major field of study?

_____

What do you intend to be doing professionally ten years from now?

_____

_____

_____

PLEASE READ THIS PROFILE:

It is ten years since Karen and Michael completed their undergraduate degrees. Both have the ability to practice their profession in an international setting. Whether working in the U.S. or abroad, their job performance is enhanced by their world knowledge. Each one is fluent in a foreign language. When there is a misunderstanding, they consider the cultural viewpoint of the others involved. Karen and Michael welcome the opportunity to work with people from other countries.

DIRECTIONS: Circle one number for each answer, using a scale of 1 to 5 as indicated. You may refer back to the profile.

For you, what would be the consequences of being like Karen and Michael?

	unlikely.....likely
becoming a broader person	1 2 3 4 5
having an exciting life	1 2 3 4 5
starting my own business	1 2 3 4 5
experiencing other cultures	1 2 3 4 5
living or traveling abroad	1 2 3 4 5
increasing my professional capability	1 2 3 4 5
seeing other world views	1 2 3 4 5
improving my job prospects	1 2 3 4 5

How personally desirable is each of the following to you?

	undesirable.....desirable
becoming a broader person	1 2 3 4 5
having an exciting life	1 2 3 4 5
starting my own business	1 2 3 4 5
experiencing other cultures	1 2 3 4 5
living or traveling abroad	1 2 3 4 5
increasing my professional capability	1 2 3 4 5
seeing other world views	1 2 3 4 5
improving my job prospects	1 2 3 4 5
being like Karen and Michael	1 2 3 4 5

How likely is it that the following people think you ought to be like Karen and Michael?

	unlikely.....likely
my parents	1 2 3 4 5
the high school teachers I most respect	1 2 3 4 5
the college professors I most respect	1 2 3 4 5
my college friends	1 2 3 4 5
my friends outside of college	1 2 3 4 5
the people who are important to me	1 2 3 4 5

With regard to your future career, how much do the opinions of the following people matter to you?

	very little.....very much
my parents	1 2 3 4 5
the high school teachers I most respect	1 2 3 4 5
the college professors I most respect	1 2 3 4 5
my college friends	1 2 3 4 5
my friends outside of college	1 2 3 4 5
the people who are important to me	1 2 3 4 5
myself	1 2 3 4 5

How much opportunity will you have:

	very little.....very much
to practice your profession in an international setting	1 2 3 4 5
to have world knowledge that will enhance your job performance	1 2 3 4 5
to start your own business	1 2 3 4 5
to be fluent in a foreign language	1 2 3 4 5
to see things from other cultural viewpoints	1 2 3 4 5
to work with people from other countries	1 2 3 4 5
to be like Karen and Michael	1 2 3 4 5

Given the opportunity, how difficult would it be for you personally:

	very difficult.....very easy
to practice your profession in an international setting	1 2 3 4 5
to have world knowledge that would enhance your job performance	1 2 3 4 5
to start your own business	1 2 3 4 5
to be fluent in a foreign language	1 2 3 4 5
to see things from other cultural viewpoints	1 2 3 4 5
to work with people from other countries	1 2 3 4 5
to be like Karen and Michael	1 2 3 4 5

What are your intentions for ten years from now?

	unlikely.....likely
to practice your profession in an international setting	1 2 3 4 5
to have world knowledge that will enhance your job performance	1 2 3 4 5
to start your own business	1 2 3 4 5
to be fluent in a foreign language	1 2 3 4 5
to see things from other cultural viewpoints	1 2 3 4 5
to work with people from other countries	1 2 3 4 5
to be like Karen and Michael	1 2 3 4 5

Thinking about your life from birth through high school, check all statements that are true:

__ One or more of my grandparents were born outside the U.S./Canada
__ My mother was born outside the U.S./Canada
__ My father was born outside the U.S./Canada
__ I heard a language other than English being spoken at least once a week
__ I spoke a language other than English
__ I had friends who spoke English as a foreign language
__ I studied a foreign language during my elementary school years
__ I studied a foreign language during my junior high or high school years
__ One or both of my parents traveled outside the U.S./Canada at least once
__ I lived or traveled outside the U.S./Canada in my youth
- - > If so, for how many total weeks, months, or years?
___weeks ___months ___years
__ I was a foreign exchange student during my high school years
__ I looked for a college or university with a strong international emphasis

Thinking about your college years, check all statements that are true:

__ I have taken at least one *required* foreign language class
__ I have taken at least one *elective* foreign language class
__ I have taken at least one *required* course with an international or foreign focus
__ I have taken at least one *elective* course with an international or foreign focus
__ Three or more of my classes were taught by speakers of English as a foreign language
__ One or more of my college friends speak English as a foreign language
__ I have lived with one or more persons who speak English as a foreign language
__ On campus, I have received information about opportunities abroad
__ I went abroad through one or more college-sponsored programs
- - -> If so, for how many total weeks, months, or years?
___weeks ___months ___years
__ I went abroad one or more times during my college years *without* college or university sponsorship
- - -> If so, for how many total weeks, months, or years?
___weeks ___months ___years

Questions about your major:

a. What percent of the curriculum in your major field is concerned with international or foreign topics? ____%

b. To you, how important was international opportunity in the selection of your major field?

not important 1 2 3 4 5 very important

Some questions about yourself:

a. Year of your birth: 19____

b. Your gender: __ male __ female

c. Your race/ethnicity:

__ African-American
__ Asian-American
__ Hispanic
__ Native American
__ White/Caucasian
__ Other:_____

d. Your parents' job or profession (if known):

Mother: _____

Father: _____

e. Your parents' highest level of education (check one for each parent):

mother
father
__ __ did not complete high school
__ __ completed high school
__ __ some college
__ __ completed college
__ __ masters degree
__ __ doctorate or professional degree
__ __ unknown

f. Are you a citizen of the U.S./Canada?

___yes ___no

g. Were you involved in the pilot study for this research project?

___yes ___no

How can colleges and universities prepare students for an increasingly global world?

Please return this survey and the post card for the $50 drawing separately to:

Susan English
2117 School of Education 1259
University of Michigan

You can read the results on email:

susan.survey@umich.edu

Many thanks for your participation! *Susan*

BIBLIOGRAPHY

Ajzen, I., & Fishbein, M. (1980). Understanding Attitudes and Predicting Social Behavior. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. Journal of Experimental Social Psychology, 22, 453-474.

Altbach, P. G., & Wang, J. (1989). Foreign Students and international Study: Bibliography and Analysis. Lanham, MD: University Press of America, Inc.

Bachner, D. J., Zeutschel, U., & Shannon, D. (1993). Methodological issues in researching the effects of U.S.-German educational youth exchange: A case study. International Journal of Intercultural Relations, 17, 41-71.

Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions, and behavior. Social Psychology Quarterly, 55(2), 178-204.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51(6), 1173-1182.

Barrows, T. S., & Others. (1981). College Students' Knowledge and Beliefs: A Survey of Global Understanding . The Final Report of the Global Understanding Project. New Rochelle, NY: Change Magazine Press.

Carlson, J. S., & others. (1991). Study abroad: The experience of American undergraduates in Western Europe and the United States. New York: Council on International Educational Exchange.

Carlson, J. S., Burn, B. B., Useem, J., & Yachimowicz, D. (1990). Study Abroad: The Experience of American Undergraduates. Westport, CT: Greenwood Press.

Du Bois, C. (1956). Foreign Students and Higher Education in the United States. Washington, DC: American Council on Education.

Eagly, A. H., & Chaiken, S. (1993). The Psychology of Attitudes. New York: Harcourt Brace Jovanovich College Publishers.

Eide, I. (1970). Students as Links Between Cultures: A Cross-Cultural Survey Based on UNESCO Studies. Oslo: Universitetsforlaget.

Feldman, K. A., & Newcomb, T. M. (1969/1994). The Impact of College on Students. New Brunswick: Transaction Publishers.

Harrop, J. C. (1991). International Education and the College Student. Unpublished doctoral dissertation, University of Virginia.

Hembroff, L. A., Knott, J. H., & Keefe, M. (1989). Internationalizing Education: A Longitudinal Analysis of Efforts at Michigan State University. Michigan State University: Center for Survey Research.

Hembroff, L. A., Knott, J. H., & Keefe, M. (1990). Survey of Michigan State University Students' Knowledge of International Affairs. Michigan State University: Center for Survey Research.

Janes, J. (1991). Priming the Pump: The Making of Foreign Area Specialists. New York: Institute of International Education.

Johnston, J. S. Jr., & Edelstein, R. J. (1993). Beyond Borders: Profiles in International Education. Washington, DC: Association of American Colleges.

Katchadourian, H., & Boli, J. (1994). Cream of the Crop: The Impact of Elite Education in the Decade After College. New York: Basic Books of Harper-Collins.

Koester, J. (1985). A Profile of the U.S. Student Abroad. New York: Council on International Educational Exchange.

Koester, J. (1987)A Profile of the U.S. Student Abroad--1984 and 1985 New York: Council on International Educational Exchange.

Lambert, R. D. (Ed). (1994). Educational Exchange and Global Competence . New York: Council on International Educational Exchange.

Leinwand, G. (1983). Without a nickel: The challenge of internationalizing the curriculum and the campus. AASCU Studies, 1983/4, 1-51.

Malanchuk, O., Hoelscher, S., Brown, D. R., & Jacobson, H. K. (1993). Ann Arbor, Michigan: University of Michigan.

Opper, S., Teichler, U., & Carlson, J. (1990). Impacts of Study Abroad Programmes on Students and Graduates, Higher Education Policy Series 11, Vol. 2. London: Jessica Kingsley Publishers.

Pascarella, E. T., & Terenzini, P. T. (1991). How College Affects Students. San Francisco: Jossey-Bass Publishers.

Pickert, S., & Turlington, B. (1992). Internationalizing the Undergraduate Curriuclum: A Handook for Campus Leaders. Washington, DC: American Council on Education.

Sell, D. K. (1983). Research on attitude change in U.S. students who participate in foreign study experiences. International Journal of Intercultural Relations, 7, 131-147.

Spencer, R. E., & Awe, R. (1971). International Educational Exchange: A Bibliography. New York: Institute of International Education.

Uyeki, E. (1993). As Others See Us: A Comparison of Japanese and American Fulbrighters . New York: Institute of International Education.

Von Klemperer, L. (1973). International Education: A Directory of Resource Materials on Comparative Education and Study in Another Country. Garrett Park, MD: Lily Von Klemperer.

Weaver, H. D. (Ed). (1989). Research on U.S. Students Abroad: A Bibliography with Abstracts. New York: Council on International Educational Exchange.

Weidman, J. C. (1989). Undergraduate socialization: A conceptual approach. J. C. Smart (Ed.), Higher Education: Handbook of Theory and Research, Vol. V . New York: Agathon Press.

Woyach, R. B. (1988). Understanding the Global Arena: A Report on the Ohio State University Global Awareness Survey. Columbus, Ohio: Ohio State University.